UKSHE, Ye.A.; STEPANOV, S.I.

Electrode processes in fused salts. Oscillographic study of the electrodeposition of magnesium in the presence of sulfates. Zhur. fiz. khim. 34 no.3:559-564 Mr '60. (MIRA 13:11)
(Salts) (Magnesium)

UKSHE, Ye.A.; BUKUN, N.G.; LEYKIS, D.I.

Capacity of the electric double layer in fused salts. Dokl. AN SSSR 135 no.5:1183-1186 D '60. (MIRA 13:12)

1. Institut elektrokhimii AN SSSR i Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta. Predstavleno akademikom A.N. Frumkinym.

(Salts) (Electric double layer)

BUKUN, N.G.; UKSHE, Ye.A.

Reaction of metallic magnesium with fused chlorides. Zhur.neorg. khim. 6 no.4:913-919 Ap '61. (MIRA 14:4)

1. Bereznikovskiy filial Vsesoyuznogo alyuminiyevomagniyevogo instituta.
(Magnesium) (Chlorides)

S/074/61/030/002/001/001
B124/B203

AUTHORS: Ukshe, Ye. A. and Bukun, N. G.

TITLE: Dissolution of metals in molten halides

PERIODICAL: Uspekhi khimii, v. 30, no. 2, 1961, 243-273

TEXT: The present paper gives a survey of publications on dissolution processes of metals in melts without making mention of new papers by the authors. The dissolution of metals in salt melts is of great importance to many electrometallurgical and thermal processes such as the production of titanium, magnesium, aluminum, sodium, etc., as well as to the purification of metals. The solutions mentioned are most interesting also from a theoretical point of view since they permit essential conclusions to be drawn on the interaction in ion media and on the liquid state. For the formation of true solutions of metals in salt melts, three concepts can be assumed: 1) Dissolution of the metal in the form of atoms evenly distributed over the entire volume of the solution; 2) dissolution of the metal in salt melts by chemical interaction of the electrolyte with the metal, with forma-

Dissolution of metals in molten...

tion of low-valency ions (sub-ions); and 3) solutions of metals in salt melts may be regarded as structural units which are identical with the color centers (F centers) so that these solutions might be called ion-electron liquids. Data are given on the formation of ions and compounds of low-valency. The apparent valency $\tilde{n}$ of a metal can be determined from the anodic current yield of aqueous solutions of metals, and is generally very low (Table 1). The $\tilde{n}$ values are not dependent on the current density or the concentration of the solution but they are determined by the anodic potential (Table 2). The basic data for calculating the formation heats of subhalides are also given, namely I = ionization potential, σ = sublimation temperature, I/2 D = dissociation temperature, E = electron affinity, and the ionic radii (Table 3). The calculated and experimentally found values for the lattice energies and the formation heats of subhalides are given (Table 4), the difference not exceeding 10%. The color centers in ion crystals are described, studied, and characterized. The solubility of alkali-, alkaline-earth-, amphoteric, and other metals in halide melts, as well as in dependence on the type of halide, was also studied, as well as the effect of secondary cations on the solubility of metals. The solutions of metals in

Dissolution of metals in molten...

salt melts were also studied cryoscopically. The structures of sodium and potassium dissolved in their halides (Table 12), and that of Bi in $BiCl_3$ (Fig. 7), were studied, where T_f is the melting point of the pure solvent, $K_f = RT_f M_o/1000\ L_f$ is the cryoscopic constant, L the melting heat of the pure solvent, M_o its molecular weight, and ν the number of particles formed on dissolution of a metal. Further items of this study are the effect of metal dissolution on the vapor pressure of molten salts, the volume effects on metal dissolution in salt melts, potentiometric investigations of metal solutions, and the electrical conductivity of metals dissolved in salt melts. Finally, magnetic and spectroscopic studies of metals dissolved in salt melts, and the dissolution in electrochemical processes, are described. Ya. I. Ol'shanskiy, S. A. Semenkovich, D. V. Kokoulina, V. B. Kabanov, N. A. Belozerskiy, K. B. Yatsimirskiy, Kapustinskiy, A. F. Ioffe, P. S.Tartakovskiy, A. I. Zhurin, S. V. Karpachev, A. G. Stromberg, M. V. Smirnov, N. Ya. Chukreyev, A. I. Bukhbinder, L. N. Antipin and L. Suskiy are mentioned. There are 10 figures, 16 tables, and 167 references: 53 Soviet-

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S/074/61/030/002/001/001
B124/B203

Dissolution of metals in molten...:

bloc and 71[illegible] non-Soviet-bloc.

ASSOCIATION: Bereznikovskiy filial Vsesoyuznogo alyuminiyevomagniyevogo in-ta (Berezniki Branch of the All-Union Aluminum and Magnesium Institute)

Legend to Table 1:
Apparent valency ñ in anodic dissolution of some metals in aqueous solutions.
a) Normal valency

Table 1

Me	Be	Al	Mg	Zn	Tl	Ga	U	In	Mn	Hg
Норм. валентность a)	2	3	2	2	3	3	4	3	3	2
$\tilde{n}$	1	1.3	1,2	1,4	1,5	1	1,4	1	1,7	1

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Dissolution of metals in molten...

Legend to Table 2:
Dependence of $\bar{n}$ on the type of solution and the anodic potential; a) solution, b) concentration in g-equ/l

ТАБЛИЦА 2

Зависимость $\bar{n}$ от природы раствора и от потенциала анода по [44, 45]

a) Раствор	b) Концентрация в г-экв/л	i_a mA/см²	ψ b	$\bar{n}$
$MgCl_2$	0,1—4,0	150	—1,7	1,26
$MgBr_2$	0,1—1,0	100	—1,62	1,30
$MgSO_4$	0,01—1,0	100	—1,55	1,35
$MgSO_4$ + K_2CrO_4	1,0 0,05	100	—1,5	1,30
$KClO_3$	1,5	6,4	—1,3	1,04

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Dissolution of metals in molten...

Legend to Table 3: Thermochemical characteristics of ions, kcal/mole; a) ion

ТАБЛИЦА 3

Термохимические характеристики ионов, ккал/моль

а) Ион	I	σ	r, Å	а) Ион	I	σ	r, Å	Ион	E	$^1/_2D$	r, Å
Mg^+	177,7	35,9	1,91	Zn^+	216,0	31,0	1,27	F^-	93,5	32,2	1,33
Ca^+	142,2	46,0	2,36	Cd^+	206,0	27,0	1,44	Cl^-	88,2	28,9	1,81
Sr^+	132,8	39,2	2,53	In^+	134,8	58,2	1,49	Ba^-	81,6	26,9	1,96
Ba^+	121,6	42,0	2,74	Ga^+	139,8	66,0	1,33	J^-	74,6	25,4	2,20
Tl^+	142,3	44,5	1,49	Sn^+	140,6	72,0	1,62				
Al^+	139,5	75,0	1,60	Pb^+	172,5	46,3	1,76				
Hg^+	242,6	14,5	1,44	Sb^+	209,7	60,8	1,46				
Bi^+	169,4	49,7	1,75								

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Dissolution of metals in molten...

Legend to Table 4:
Lattice energies and formation heats of subhalides and of normal salts (298°K);
a) subhalide,
b) kcal/mole,
c) halide

a) Gitter-typ	U, kcal/Mol b)	W, kcal/Mol b)	Typ	W, kcal/Mol b)	Gitter-typ c)	U, kcal/Mol b)	W, kcal/Mol b)	Typ	W, kcal/Mol b)
MgF	189,4	37,1	MgF_2	263,5	AlF	187,7	34,5	AlF_3	311,0
MgCl	179,3	25,0	$MgCl_2$	153,4	AlCl	173,8	18,6	$AlCl_3$	166,2
MgBr	179,8	21,6	$MgBr_2$	123,7	AlBr	170,2	10,4	$AlBr_3$	125,8
MgJ	178,6	14,2	MgJ_2	86,0	AlJ	168,8	3,0	AlJ_3	75,2
CaF	168,2	41,0	CaF_2	290,3	TlF	193,3	67,8	TlF_3	—
CaCl	157,9	29,0	$CaCl_2$	190,0	TlCl	177,5	50,0	$TlCl_3$	—
CaBr	157,9	24,4	$CaBr_2$	161,3	TlBr	175,5	43,4	$TlBr_3$	—
CaJ	156,7	17,7	CaJ_2	127,8	TlJ	171,5	33,9	TlJ_3	—
SrF	159,1	48,4	SrF_2	290,3	ZnCl	210,7	23,0	$ZnCl_2$	99,4
SrCl	151,8	39,1	$SrCl_2$	198,0	CdCl	202,1	28,4	$CdCl_2$	93,0
SrBr	151,7	34,4	$SrBr_2$	171,1	InCl	175,5	41,8	$InCl_3$	128,4
SrJ	153,7	30,9	SrJ_2	135,5	GaCl	181,9	35,4	$GaCl_3$	125,4
BaF	151,4	49,1	BaF_2	286,9	SnCl	173,8	20,5	$SnCl_2$	83,6
BaCl	144,5	40,2	$BaCl_2$	205,6	PbCl	182,4	22,9	$PbCl_2$	85,8
BaBr	144,6	35,7	$BaBr_2$	180,4	SbCl	200,9	—1,3	$SbCl_3$	91,6
BaJ	144,0	29,6	BaJ_2	144,0	BiCl	180,1	20,3	$BiCl_3$	90,8

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S/074/61/030/002/001/001
B124/B203

Dissolution of metals in molten...

Legend to Table 12:
Structure of dissolved sodium and potassium in halides; a) salt, b) kcal/mole

ТАБЛИЦА 12

Структура растворенного натрия и калия в галогенидах

a) Соль	T_f, °K	$L_f \frac{b)\ khd_s}{M}$	ΔT_f, °K	$x \cdot 10^3$	K_f	ν	a) Соль	T_f, °K	$L_f \frac{b)\ khd_s}{M}$	ΔT_f, °K	$x \cdot 10^3$	K_f	ν
NaF	1268	7,8	5	2,5	13,7	0,00	KF	1131	6,75	9	45	18,8	0,00
NaCl	1073	6,7	5	2,1	18,5	0,73	KCl	1043	6,34	18	10	26,0	0,54
NaBr	1020	6,24	7	2,9	33,2	0,72	KBr	1007	6,10	26	17	32,4	0,46
NaJ	933	5,64	3	1,6	49,0	0,55	KJ	954	5,74	23	12	48,5	0,57

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Dissolution of metals in molten...

Legend to Fig. 7:
Comparison of experimental data on the melting-point lowering of $BiCl_3$ on dissolution of Bi with the calculated values obtained for various structural schemes of solutions, a) mole% of Bi.

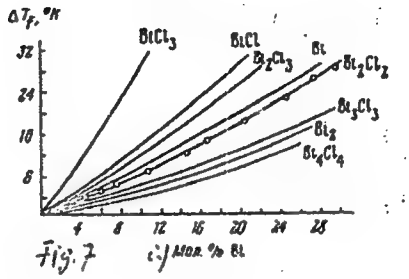

Fig. 7

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UKSHE, Ye.A.; BUKUN, N.G. (Berezniki)

Faradic impedance of lead in molten chlorides. Zhur.fiz.khim. 35 no.12:2689-2694 D '61. (MIRA 14:12)

1. Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta.

(Lead chloride--Electric properties)

DEVYATKIN, V.N.; UKSHE, Ye.A.

Behavior of iron electrodes in molten chlorides. Zhur.prikl.khim. 35 no.6:1328-1333 Je '62. (MIRA 15:7)

1. Filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta.
(Electrodes, Iron) (Chlorides)

UKSHE, Ye.A.; BUKUN, N.G.; LEYKIS, D.I.

Double electrical layer in fused salts. Zhur. fiz. khim. 36 no.11:2322-2328 N'62. (MIRA 17:5)

1. Institut elektrokhimii AN SSSR i Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta.

RYABUKHIN, Yu.M.; UKSHE, Ye.A.

Diffusion coefficients of lead in fused chlorides. Dokl.AN SSSR 145 no.2:366-368 Jl '62. (MIRA 15:7)

1. Bereznikovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo alyuminiyevo-magniyevogo instituta. Predstavleno akademikom A.N.Frumkinym.
(Diffusion) (Lead compounds) (Fused salts)

S/062/63/000/001/005/025
B101/B186

AUTHORS: Ukshe, Ye. A., Bukun, N. G., and Leykis, D. I.

TITLE: Effect of the nature of the electrolyte on the capacity of the double layer in molten salts

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1963, 31-36

TEXT: The capacity of the double layer of a molten lead electrode was measured at 18-20 kc/s. The electrode was in a capillary tube and covered with molten alkali halide. The reference electrode used was: Pb|10% by weight $PbCl_2$ + electrolyte tested. The following compounds were studied as electrolytes: NaCl; NaBr; NaI; NaCl + NaF 1:1; NaCl + KCl 1:1; NaCl + NaI; KCl, KBr, KI, KCl + KF; CsCl, CsI; LiCl; LiCl + 20 mole% LiI. The temperature was 800°C, with NaCl 820°C. Results: The nature of the electrolyte had a marked effect on the structure of the double layer. The alkali halides can be subdivided into two groups. Na and Li halides give high capacity, this being strongly dependent on the nature of the anion: C_{min} ($\mu F/cm^2$) is for NaCl 43, NaBr 52, NaI 75, LiCl 35,

Card 1/3

LiCl + 20 mole% LiI 75; the potential φ_{min} is about -0.46 to -0.48 v, the C-versus-φ curve rises sharply on both sides of the minimum. The capacity produced by K and Cs halides is lower and not much affected by the nature of the anion (except F^-): C_{min} is for KCl and CsCl 28, KBr 29, KI 32, CsI 33; φ_{min} is about -0.55 to -0.60 v; the curve $C = f(\varphi)$ is flatter. In both groups, addition of F^- ions increases the capacity proportionately to the F^- concentration. Iodide addition to NaCl and LiCl increases C_{min} rapidly to the limiting value of NaI and LiI respectively, which is reached already with 20 mole% iodide. The following assumptions are made to explain the results: (1) The thickness and capacity of the double layer changes owing to deformation of the ions and of the double layer; (2) the surface activity of the anions increases in the order $F^- < Cl^- < Br^- < I^-$; (3) Owing to their small radius, the Li^+ and Na^+ cations replace anions from the metal-electrolyte interface and their amount adsorbed exceeds the equivalent quantity. There are 6 figures and 1 table.

Effect of the nature of the ...

S/062/63/000/001/005/025
B101/B136

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electrochemistry of the Academy of Sciences USSR); Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta (Berezniki Branch of the All-Union Institute of Aluminum and Magnesium)

SUBMITTED: May 9, 1962

Card 3/3

UKSHE, Ye.A. (Berezniki); RYABUKHIN, Yu.M. (Berezniki)

Regularities of diffusion and viscous flow in fused chlorides.
Izv. AN SSSR, Met. i gor. delo no.5:84-88 S-O '63. (MIRA 16:11)

BUKUN, N.G.; UKSHE, Ye.A.

Temperature dependence of the capacity of the double layer in fused salts. Zhur. prikl. khim. 36 no.9:1965-1969 D '63. (MIRA 17:1)

1. Bereznikovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo allyuminiyevo-magniyevogo instituta.

L 12876-63 EWP(q)/EWT(m)/BDS AFFTC/ASD RDW/JD
ACCESSION NR: AP3002943 S/0076/63/037/006/1401/1403

AUTHOR: Bukun, N. G.; Ukshe, Ye. A.

TITLE: The capacity of the double layer of tellurium and gallium in chloride fusion

SOURCE: Zhurnal fizicheskoy khimii, v. 37, no. 6, 1963, 1401-1403

TOPIC TAGS: liquid tellurium, callium, argon, electrocapillary curve, chloride fusion

ABSTRACT: In this work, the results of measuring the capcity of the double electrical layer of liquid tellurium and gallium in the eutectic mixture KCl from LiCl are presented. The gallium capacity curves were taken at 450C and at 550C for tellurium. The measurements were taken in a stream of argon. The electrode used for comparison was Pb/10 in wt. %, PbCl sub 2, KCl:LiCl, which has a more positive potential than the stationary lead electrode used for measurements of electrocapillary curves. The obtained results confirm that, in the fused salts, the potential minimum is connected with the transference of the metal potential across the zero charge. The results agree satisfactorily with the presented electrocapillary measurement of the corresponding metals. Orig. art. has: 1 table and 3 figures.

Association: All-Union Aluminum and Magnesium Inst.

Card 1/2

UKSHE, Ye.A.; BUKUN, N.G.

Method of measuring the capacity of the electrical double layer in fused salts. Zhur.fiz.khim. 37 no.7:1646-1649 Jl '63. (MIRA 17:2)

1. Vsesoyuznyy alyuminiyevo-magniyevyy institut, Bereznikovskiy filial.

UKSHE, Ye.A.; TOMSKIKH, I.V.

Effect of the nature of the electrolyte on the electrocapillary curves of lead in fused salts. Dokl. AN SSSR 150 no.2:347-348 My '63. (MIRA 16:5)

1. Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta. Predstavleno akademikom A.N.Frumkinym.
(Electrocapillary phenomena) (Lead) (Electrolytes)

UKSHE, Ye.A.; BUKUN, N.G.

Study of binary salt systems by the method of double layer capacity.
Zhur.neorg.khim. 9 no.4:944-948 Ap '64. (MIRA 17:4)

UKSHE, Ye.A.; BUKUN, N.G.

The system $MgCl_2$ - LiCl. Zhur. neorg. khim. 9 no.7:1766-1767 Jl '64. (MIRA 17:9)

UKSHE, Ye.A.; BUKUN, N.G.

Study of salt systems $CaCl_2$ - NaCl and $CaCl_2$-KCl using the electrode capacity method. Zhur. neorg. khim. 9 no.10:2494-2495 O '64.
(MIRA 17:12)

1. Bereznikovskiy filial Vsesoyuznogo alyumniyevo-magniyevogo instituta.

UKSHE, Ye.A.; BUKUN, N.G.

Effect of the nature of fused salt and of the temperature on the properties of a double-electric layer. Elektrokhimiia 1 no.1:113-115 Ja '65. (MIRA 18:5)

1. Boreanikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta.

ACCESSION NR AP5009271 UR/0370/65/000/001/0148/0150

AUTHOR: Ukshe, Ye. A. (Berezniki); Stepanov, S.I. (Berezniki); Bakum, N.G. (Berezniki)

TITLE: Behavior of solid metals in fused potassium chloride

SOURCE: AN SSSR. Izvestiya. Metally, no. 1, 1965, 148-150

TOPIC TAGS: fused potassium chloride, iron electrode, nickel electrode, titanium electrode, molten salt electrolyte, electrode

ABSTRACT: In order to study the influence of the oxygen present in a melt on metals, the electrochemical behavior of iron (low-carbon steel), nickel (brand NP-2) and titanium (brand VT-1) in fused potassium chloride was investigated at 820C, the surface of the melt being freely aerated with oxygen. The capacity, resistance, and steady-state potential of the electrodes were measured (see Fig. 1 of the Enclosure). The character of the C-τ and R-τ curves for the iron and nickel electrodes showed that in both cases a poorly conducting [illegible] formed on the electrodes. The [illegible]

Card 1/3

L 45462-65

ACCESSION NR: AP5009271

0

[illegible] then in the case of iron. The behavior of titanium in fused

[illegible] again undergoes [illegible]

[illegible]TION: None

[illegible]SUBMITTED: 24Feb64 [illegible]SUB CODE: MM, IC

NO REF SOV: 004 OTHER: 008

Card 2/3

UKSHE, Ye.A. (Berezniki); RYABUKHIN, Yu.M. (Berezniki); VOLKOVA, S.V. (Berezniki)

Coefficients of the diffusion of lead and silver ions in fused salts. Izv. AN SSSR. Met. no.4:89-91 Jl-Ag '65.
(MIRA 18:8)

UKSHE, Ye.A.; DEVYATKIN, V.N.

Kinetics of hydrogen electrolytic evolution from fused salts. Elektrokhimiia 1 no.6:627-632 Je '65. (MIRA 18:7)

1. Institut elektrokhimii AN SSSR.

BUKUN, N.G.; UKSHE, Ye.A.

Fused mixtures of barium chlorides with alkali metal chlorides studied by the capacitance measurement method. Zhur. neorg. khim. 10 no.3:729-730 Mr '65.

Study of binary solutions of alkali metal chlorides by the capacitance measurement. Ibid.:731-732

(MIRA 18:7)

1. Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta.

UKSHE, Ye.A.; BUKUN, N.G.

Capacity method for studying fused mixtures of strontium and alkali metal chlorides. Zhur.neorg.khim. 10 no.4:1008-1010 Ap '65. (MIRA 18:6)

1. Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta.

UKSHE, Ye.A.

Structure and properties of fused salts. Usp.khim. 34 no.2:322-355 F '65. (MIRA 18:5)

1. Bereznikovskiy filial Vsesoyuznogo alyuminiyevogo magniyevogo instituta.

DEVYATKIN, V.N.; UKSHE, Ye.A.

Solubility of hydrogen chloride in salt solutions. Zhur. prikl. khim. 38 no.7:1612-1614 Jl '65. (MIRA 18:7)

UKSHE, Ye.A. (Berezniki)

Free volume of fused salts. Izv. AN SSSR. Met. i gor. delo no.6: 103-106 N-D '64. (MIRA 18:3)

UKSHE, Ye.A. (Berezniki); STEPANOV, S.I. (Berezniki); BUKUN, N.G. (Berezniki)

Behavior of hard metals in fused potassium chloride. Izv. AN SSSR. Met. no.1:148-150 Ja-F '65. (MIRA 18:5)

UKSHE, Ye.A.; BUKUN, N.G.

Study of fused mixtures of RbCl - $MgCl_2$ and CsCl - $MgCl_2$ by the double layer capacity method. Zhur. neorg. khim. 10 no.2:551-552 F '65. (MIRA 18:11)

1. Bereznikovskiy filial Vsesoyuznogo alyuminiyevo-magniyevogo instituta. Submitted June 25, 1964.

UKSHE, Ye.A.; DEVYATKIN, V.N.

Some regularities of the formation of liquid metal deposit on a solid cathode. Zhur. prikl. khim. 38 no.5:1153-1156 My '65.
(MIRA 18:11)

1. Bereznikovskiy filial vsesoyuznogo alyuminiyevo-magniyevogo instituta.

UKSHE, Ye.A.; DEVYATKIN, V.N.

Dissolution of hydrogen chloride in fused salts. Zhur. fiz. khim. 39 no.9:2288-2291 S '65. (MIRA 18:10)

1. Vsesoyuznyy alyuminiyevomagniyevyy institut, Bereznikovskiy filial.

UKSHE, Yu., inzhener, elektromekhanik

Shortcomings of the loading crane on the motorship "Severoles" made apparent during the ship's operation. Mor. flot 22 no.8:30-32 Ag '62. (MIRA 15:7)

1. Teplokhod "Severoles".

(Motorships)
(Cargo handling--Equipment and supplies)

ÜKSHE, Ya., inzh.-elektromekhanik, aspirant

Ways of introducing automatic control of the generator part of electric power plants on motorships of the "Volgoles" type. Mor. flot 23 no.3:27-29 Mr '63. (MIRA 16:3)

1. Teplokhod "Severoles" Baltiyskogo parokhodstva i Leningradskoye vysshego inzhenernoye morskoye uchilishche im. admirala Makarova.
(Electricity on ships) (Automatic control)

ÜKSIP, A.; PARN, A., red.; PILL, A., tekhn. red.

[Flora of the Estonian S.S.R.] Eesti NSV floora. Tallinn, Eesti Riiklik Kirjastus. Vol.7. 1961. 479 p. (MIRA 15:2)

1. Eesti NSV Teaduste Akadeemia. Zooloogia ja Botaanika Instituut.

(Estonia—Hawkweed)

UKSTIN, E. F.

USSR/Electricity - Cables
Books

Feb 51

"Review of I. I. Grodnev and B. F. Miller's Book 'Communications Cables,'" E.F. Ukstin, K. A. Lyubimov, N. I. Venchugov, Engineers, State Sci Res Inst of Cable Ind

"Elektrichestvo" No 2, pp 94, 95

Favorable review of subject book, in which are investigated the principles of communications cable theory; principles of their elec calculation and constr, and problems involving production technol of sym and coaxial cables. Special attention is given to the

178T37

[redacted]

USSR/Electricity - Cables (Contd)

Feb 51

theory of influence in cable circuits, constr of coaxial cables, and shielding. Published by "Gosenergoizdat," 480 pp, R 15:65.

[redacted]

178T37

UKSTIN, E. F. (Eng.), SERGEYCHUK, K. Ya. and LYUBIMOV, K. A.

"On the Problem of Using New Types of Intercity Communications Cables," Vest. Svyazi, No.7, pp 3-5, 1953

Translation No. 543, 27 Apr 56

GRODNEV, I.I.; UKSTIN, E.F.

Calculation of the optimum designs of symmetrical cables in trunk communication. Elektrosviaz' 10 no.5:56-65 My '56. (MLRA 9:8)
(Radio lines)

GRODNEV, I.I.; LYUBIMOV, K.A.; USTIN, E.F.

Multilayer combination shields for communication cables. Elektrosviaz' 10 no.12:48-56 D '56. (MLRA 9:12)
(Electric cables)

Ukstin, E.F.

KULAKOVA, R.V., kandidat tekhnicheskikh nauk; MIRZOYEV, A.G., inzhener; UKSTIN, E.F., inzhener; KHUDYAKOVA, V.A., inzhener; MAKAROVA, L.I., inzhener.

Electric strength of main cables having paper cord-styroflex insulation. Vest. elektroprom. 28 no.4:31-35 Ap '57. (MIRA 10:6)

1. Nauchno-issledovatel'skiy institut kabel'noy promyshlennosti.
(Electric cables)

GRODNEV, I.I., prof. LYUBIMOV, K.A.; UKSTIN, E.F.

Future development of wire communications technology. Vest. sviazi 22 no.1:11-13 Ja '62. (MIRA 14:12)

1. Vsesoyuznyy zaochnyy elektrotekhnicheskiy institut svyzai (for Grodnev). 2. Zamestitel' nachal'nika Nauchno-issledovatel'skogo instituta kabel'noy promyshlennosti po nauchnoy chasti (for Lyubimov).

(Telephone lines)
(Radio lines)

UKSUSNIKOV, B.

Perfecting production. Prom.koop. no.11:54-55 N '55. (MLRA 9:5)

1. Nachal'nik konstruktorsko-tekhnologicheskogo byuro pri Mordpromsovete.
(Mordovia--Cooperatice Societies)

MEL'NIKOV, L.M.; MEDVEDEVA, G.A.; OLERSKAYA, S.M.; KORCHEMKINA, A.S.; BUTAKOV, D.K.; UKSUSNIKOVA, A.A.

Determining the composition of sulfides in steels alloyed with nickel and manganese. Zav. lab. 31 no.2:142-146 '65. (MIRA 18:7)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.

EWT(d)/EED-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c) BB/GG

ACCESSION NR [illegible]

AUTHOR: Salmin, Yu. N.; Sanderov, V. L.; Uksusov, A. S.

TITLE: A device for inspecting memory plates made of ferromagnetic material.
Class 42, No. 170743

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 88-89

TOPIC TAGS: storage device, memory plate, quality control

ABSTRACT: This Author's Certificate introduces a device for inspecting memory plates made of ferromagnetic material. The device contains conductors which pass [illegible]

The conductors which pass through [illegible] conducting material in the liquid state. This liquid makes contact with [illegible] are located in the backing plate channels.

ASSOCIATION: none

Card 1/3

PILIKOVSKIY, Mikhail Yakovlevich; RYBAKOV, Vladimir Mikhaylovich; UKRAINSKIY, E.M., retsenzent; BELITSINA, N.M., prof., doktor tekhn. nauk, red.; SOKOLOVA, V.Ye., red.; SHVETSOV, S.V., tekhn. red.

[Processing of synthetic fibers by cotton-spinning machinery] Pererabotka khimicheskikh volokon na khlopkopriadil'nom oborudovanii. Pod red. N.M.Belitsina. Moskva, Izd-vo nauchno-tekhn. lit-ry RSFSR, 1961. 166 p. (MIRA 15:1)
(Textile fibers, Synthetic)
(Spinning machinery)

UKRAINSKIY, F.F.

Expansion of the production of chemicals in coke by-product plants in the Ukrainian S.S.R. Met. i gornorud. prom. no. 2: 42-43 Mr-Ap '64. (MIRA 17:9)

PETROV, Vladimir Sergeyevich; TULIN, Sergey Alekseyevich; UKRAINSKIY, F.Ya., red.; SMUL'SKAYA, T.K., red.-leksikograf; AKSEL'ROD, I.Sh., tekhn. red.

[Russian-Czech polytechnical dictionary]Russko-cheshskii politekhnicheskii slovar'. Moskva, Glav.red. inostrannykh nauchno-tekhn. slovarei Fizmatgiza, 1962. 635 p. (MIRA 15:12)
(Russian language--Dictionaries--Czech)
(Technology--Dictionaries)

UKRAINSKIY, M.

Let us restore to our mine its past glory. Mast.ugl.4 no.8:12 Ag'55. (MIRA 8:10)

1. Brigadir prokhodchikov shakhty no.30-31 tresta Shakhterskantratsit Stalinskoy oblasti
(Donets Basin--Coal mines and mining)

VELLER, L.Ye., red.; YELANSKIY, A.N., red.; UKRAINSKIY, M.A., red.;

[Diamond mining in capitalist countries] Almazodobyvaiushchaia promyshlennost' kapitalisticheskikh stran. Moskva, 1963. 207 p. (MIRA 17:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut informatsii i tekhniko-ekonomicheskikh issledovaniy tsvetnoy metallurgii.

UKRAINSKIY, M.A., st. nauchn. sotr.; MASKEVICH, M.M.; LODEYSHCHIKOV, V.V., kand. tekhn. nauk; SKOBEYEV, I.K., prof., doktor tekhn. nauk; STAKHEYEV, I.S., kand. tekhn. nauk; KULIKOV, A.V., kand. tekhn. nauk; KULIKOVA, S.Ya., kand. geol.-miner. nauk; POKROVSKIY, L.A.; ALEKSANDROVA, N.N.; YELANSKIY, A.N., st. nauchn. sotr.; TROKSKAYA, Z.I.; BANDENOK, L.I., nauchn. sotr.; VERIGO, K.N.; TEMKO, V.P., red.

[Gold mining industry in capitalist countries; technical and economic survey] Zolotodobyvaiushchaia promyshlennost' kapitalisticheskikh stran; tekhniko-ekonomicheskii obzor. Moskva, 1963. 337 p. (MIRA 17:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut informatsii i tekhniko-ekonomicheskikh issledovaniy tsvetnoy metallugii. 2. TSentral'nyy nauchno-issledovatel'skiy institut informatsii i tekhniko-ekonomicheskikh issledovaniy tsvetnoy metallurgii (for Ukrainskiy, Yelanskiy, Verigo).

UKRAINSKIY, V.

Book about metallurgists "Path of glory" by B.Borovik, I.Artiunov. Reviewed by V.Ukrainskii). Metallurg 5 no.2: 3 of cover F '60. (MIRA 13:5)
(Metallurgists) (Borovik, B.)
(Artiunov, I.)

UKHAINSKIY, V.

Caucasus, Northern - Cotton Growing.

Urgent problems of Stavropol elite farms in regard to cotton.
Khlopkovodstvo no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953 Uncl.

UKRAINSKIY, V. [Ukrains'kyi, V.]

Electric bridge. Nauka i zhyttia 12 no.1:44 Ja '63. (MIRA 16:3)
(Ukraine—Electric lines)

UKRAINSKIY, V.

Mine-brigade leader Grigorii Krupoder. Mast.ugl. 3 no.2:22 F '54.
(MLRA 7:3)
(Coal mines and mining) (Krupoder, Grigorii)

UKRAINSKIY, V.

In new Gorlovka. Mast.ugl.3 no.3:16a-16d Mr '54. (MLRA 7:4)
(Gorlovka--Coal miners) (Coal miners--Gorlovka)

UKRAINSKIY, V.

Youth builds. Mast. ugl. 5 no.8:14-15 Ag '56. (MLRA 9:11)

(Donets Basin--Coal miners)

UKRAINSKIY, V.

Workers in coal preparation plants. Mast.ugl.6 no.3:24a-24b Mr '57. (MLRA 10:4)

(Donets Basin--Coal preparation)

UKRAINSKIY, V.

Fine traditions. Mast. ugl. 7 no.2:8a-8b F '58. (MIRA 11:3)
(Donets Basin--Coal mines and mining)

UKRAINSKIY, V.

Right prientation of a club's activities. Mast.ugl. 9 no.8: 26 Ag '60. (MIRA 13:8)
(Coal mines and mining--Study and teaching)

UKHAINSKIY, V.G.

"The Adaptable Variability of the Synovial Membranes in Human Hands and Anterior Extremities of Vertebrate Animals." Dr Med Sci, Second State Moscow Medical Inst imeni I.V. Stalin, Vinitsa, 1954. (KL, No 1[illegible], Apr 55)

SO: Sum.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

UKRAINSKIY, Vladimir Grigor'yevich.

Vinnitsa State Med Inst, Academic degree of Doctor of Medical Sciences, based on his defense, 19 April 1954 in the Council of the 2nd Moscow State Med Inst imeni Stalin of his dissertation entitled: "About the Adaptive Changes of Synovial Sheaths of Man's Hand and the Frontal Extremities of Vertebrate Animals".

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no 7, 26, Mar 55, Byulleten' MVO SSSR, No. 14, July Moscow pp 4-22, Uncl.
JPRS/NY-429

UKRAINSKIY, V.G.

Method of topographic sectional micro-and macro-separation in the study of the interfascial spaces of vessels and nerves on animal and human corpses. Arkh.anat.gist. i embr. 34 no.5:85-87 S-O '57. (MIRA 11:1)

1. Kafedra normal'noy anatomii (zav. - doktor med. nauk V.G. Ukrainskiy) Vinnitskogo meditsinskogo instituta.

(CADAVERS
method of studying interfecial spaces of vessels & nerves in human & animal corpses)
(BLOOD VESSELS, anat. and histol.
same)
(NERVES, anat. & histol.
same)

UKRAINSKIY, V.G., doktor med.nauk, prof.

Anatomic analysis of ratinal surgical access in suppurative tendovaginitis of the human wrist. Sbor.nauch.trud.Vin.der.med. inst. 18 no.1:5-17 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk, prof. V.G. Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo instituta.
(WRIST--SURGERY) (TENDONS--INJURIES AND RUPTURES)

UKRAINSKIY, V.G., doktor med.nauk, prof.

Data on the anatomy of the vaginae synovialis in amphibians and reptiles. Sbor.nauch.trud.Vin.der.med.inst. 18 no.1:165-173 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk, prof. V.G. Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo instituta.

(SYNOVIAL MEMBRANES) (AMPHIBIA—ANATOMY)
(REPTILES—ANATOMY)

UKRAINSKIY, V.G., doktor med.nauk, prof.

Methods and technique of anatomic research. Sbor.nauch.trud. Vin.der.med.inst. 18 no.2:137-140 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk, prof. V.G. Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo instituta.

(ANATOMY)

UKRAINSKIY, V.G.

Muscles of the pectorial fin in Trigla. Arkh.anat.gist. i embr. 35 no.1:101-102 Ja-F'58. (MIRA 11:4)

1. Iz kafedry normal'noy anatomii (zav. - V.G.Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo instituta.
(FISH,
Trigla, musc. of pecyoral fin (Rus))

Name UKRAINSKIY, Vladimir Timofeyevich

Dissertation Biological and Agr Engineering Foundations of Field Grass Cultivation in the Steppe Zone

Degree Doc Agr Sci

Affiliation Azov-Black Sea Agr Inst

Defense Date, Place 19 Jun 52, Council of Voronezh Agr Inst

Certification Date 29 Dec 56

Source BMVO 7/57

UKRAINSKII, V. T.

USSR/Biology

FD 295

Card 1/1

Author : Ukrainskiy, V. T.

Title : Nodule bacteria on the roots of leguminous plants

Periodical : Mikrobiologiya, 23, 291-296, May/Jun 1954

Abstract : The development and capacity for fixing atmospheric nitrogen of the nodule bacteria found on the roots of Zaykevich's hybrid Poltava Lucerne and of Poltava 553 Sainfoin were thoroughly investigated. The influence of the moisture content of the soil, infection of seed with nodule bacteria prior to sowing, and of certain mineral and organic compounds on the development of lucerne and sainfoin and the formation of nodules on their roots is discussed in detail. Five tables; three photographs of nodule formations. Two Soviet references.

Institution : Azov-Black Sea Agricultural Institute

Submitted : November 16, 1953

USSR/Cultivated Plants - Fodders. M-4

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91698

Author : Ukrainskiy, V.T.

Inst : Azovo- Chernomorsk Agricultural Institute.

Title : The Developmental Peculiarities of the Perennial Leguminous Grasses in the Steppe Zone.

Orig Pub : Sb. nauchno-issled. rabot. Azovo-Chernomorsk. s.-kh. in-t, 1957, 15, 73-86.

Abstract : Studies of the vernalization stage, the photoperiod and the germinative development of sainfoin and alfalfa were carried out at the Azovo-Chernomorsk Agricultural Institute. In alfalfa and Transcaucasian sainfoin the vernalization stage preceeded without freezing temperatures and in the case of the spring sown sainfoin lasted 45-55 days. In the case of alfalfa this stage lasted 25-30 days and

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M

COUNTRY :USSR
CATEGORY :Cultivated Plants. Grains.

ABS. JOUR. : RZBiol., No. 21 , 1958, No. 95935

AUTHOR :Malinovskiy, N.A.; Ukrainskiy, V.V.
INST. :Stavropol' Sci. Res. Inst. of Agriculture
TITLE :Corn Varieties in the Arid Districts of Stavropol'skiy Kray

ORIG. PUB. :Byul. nauchno-tekhn. inform. Stavropol'sk. n.-i. in-ta s.kh., 1957, No.3, 3-7

ABSTRACT :The data are presented of tests of varieties with different maturing rates and origin when used for grain, silage and for green feed. In grain yield only the Krasnodarskiy 10/53 variety excelled the VIR-42, districted to the arid zone. The greatest amount of green roughage (more than 200 centners per ha.) was obtained from the late maturing varieties: Osetinskaya Belaya Zubovidnaya [dent corn] Krasnodarskiy Hybrid 4, Odessa 10, Krasno-

CARD: 1/2

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5(2)

AUTHORS: Ukrainskiy, Yu. M., Novoselova, A. V., Simanov, Yu. P. SOV/156-59-1-15/54

TITLE: Investigation of the System Vanadium - Tellurium (Issledovaniye sistemy vanadiy - tellur)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 1, pp 62 - 66 (USSR)

ABSTRACT: Unlike vanadium sulfides and selenides the system of tellurides has not yet been investigated in its entirety. The synthesis of vanadium-tellurium compounds; V and Te in various ratios were heated for 500 hours up to 800° in quartz ampoules which were closed by melting in vacuum. Temperature gradually decreased to room temperature for a period of 400 hours. This was done in order to cause the formation of compounds which are unstable at higher temperatures. The samples obtained were radiographically investigated. The V lines disappear already with a composition $VTe_{0.20}$. The roentgenogram of this α phase remains unchanged up to $VTe_{0.77}$. Even with a wide arc of traverse a shift of the interference lines

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does not occur. Hence a tetrahedral coordination of the atoms in this phase is assumed. Since the atom radii of Te and V are almost similar one can be substituted for the other in the crystal system without the interference lines being shifted. At $VTe_{0,82}$ the diffraction picture changes suddenly. The β phase is formed, the range of which lies between $VTe_{0,82}$ and $VTe_{1,27}$. At $VTe_{1,50}$, corresponding to V_2Te_3, the next phase follows the width of which, however, could not be found because the roentgenograms of the next sample ($VTe_{1,63}$) were useless. VTe_2 is characterized by its angles of reflection. With a higher tellurium content there are again lines of elementary tellurium. Thus the sample with the stoichiometric ratio VTe_3 indicates only the lines of VTe_2 and Te. Consequently, higher tellurides are not formed. The Debye roentgenograms of the α and β phase could not be explained. The α phase showed more than 100 lines, the β phase 60 - 65. Consequently, a less symmetrical (monoclinic or triclinic)

structure of these phases is to be assumed. V_2Te_3 probably is monoclinic. At VTe_2 2 modifications were found; the one is scale-like, the other forms elastic threads. Debye diagrams of these thread-like crystals were plotted (Table) and the axes were measured. It was found: a = 6.47 kx, b= 7.28 kx and c= 6.26 kx (rhombic syngony). Diagrams of the conductivity and thermo-electromotive force (Fig) show characteristic maxima for the phases α and β and for VTe_2. The conductivity of all samples decreased after three months, however, it remained so high that a metallic character of the bond in the vanadium tellurides may be presumed in view of the weak electromotive force. There are 3 figures, 1 table, and 9 references, 4 of which are Soviet.

ASSOCIATION: Kafedra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Inorganic Chemistry of Moscow State University imeni M. V. Lomonosov)

SUBMITTED: October 1, 1958

5(2), 18(6)

AUTHORS: Ukrainskiy, Yu. M., Novoselova, A. V. SOV/78-4-1-28/48
Simanov, Yu. P.

TITLE: Investigation of the Tantalum-Tellurium System (Issledovaniye sistemy tantal - tellur)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 1, pp 148-152 (USSR)

ABSTRACT: The tantalum tellurides were investigated. For the production of tantalum tellurides pure tantalum powder with slight impurities (niobium 0.3% and titanium 0.1%) and pure tellurium (99.99%) were used. Ba means of the differential thermic analysis it was found that the reaction between tantalum and tellurium begins at 450°. The sintering of tellurides was carried out at 800°. X-ray analyses and determinations of the electric conductivity and of the thermo-electromotive force were carried out. In the system Ta-Te the compound $TaTe_3$ and two compounds of varying composition were found as follows: α phase $TaTe_{0.85-1.2}$ and β phase $TaTe_{1.5-2.0}$. A diagram of the phase composition of the system Ta-Te which had been obtained by sintering the com-

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ponents during a period of 400 hours at 900° and hardening during a period of 150 hours at 500° was plotted. The curve of the specific electric conductivity shows a maximum at the $TaTe_3$ composition. The electric conductivity of the samples varies considerably depending on the conditions under which the samples have been prepared. The curve of the dependence of the thermo-electromotive force on the composition shows a minimum with $TaTe_3$. The high value of the specific electric conductivity and the low value of the thermo-electromotive force show that the chemical bond in $TaTe_3$ is semi-metallic. The preparations with the composition $TaTe_{0.8-0.5}$ are unstable in air. Lower tellurides were not found in the tantalum-tellurium system. There are 5 figures and 4 references, 2 of which are Soviet.

SUBMITTED: October 1, 1957

Card 2/2

UKRAINSKIY, Yu. M., Cand Chem Sci -- (diss) "Investigation of the tellurides of tantalum and vanadium." Moscow, 1960. 11 pp; (Moscow Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov, Chemistry Faculty); 120 copies; price not given; (KL, 17-60, 142)

24.7700 1160, 1138, 1043

27261
S/020/61/139/005/014/021
B103/B217

AUTHORS: Ukrainskiy, Yu. M., and Novoselova, A. V., Corresponding Member AS USSR

TITLE: Molybdenum and rhenium diselenides

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 5, 1961, 1136-1137

TEXT: The authors studied $MoSe_2$ and $ReSe_2$ which have the same type of crystalline structure with respect to semiconductor properties. They were synthesized by the authors by sintering powdery Mo or Re (both ~99% pure) with a stoichiometric selenium quantity (99.9% pure) in quartz ampuls sealed in vacuo. Sintering took 100 hr at 700°C. The preparations obtained are gray powders of metallic luster which are perfectly stable in air. The x-ray powder pattern of the specimens was recorded by cameras of the type РКД-57 (RKD-57) with copper radiation. The authors found that $MoSe_2$ had a hexagonal elementary cell with the parameters $a = 3.28_4$ kX; $c = 12.8_8$ kX. Its pycnometric density was 6.90 ± 0.05 g/cm^3. If the elementary cell of $MoSe_2$ like that of MoS_2 is assumed to contain two molecular units, the calculated

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S/020/61/139/005/014/021
B103/B217

Molybdenum and rhenium diselenides

density of $MoSe_2$ was 7.0 g/cm^3. This agree well with the experimentally determined density. Most lines of the x-ray powder pattern can be indicated by the same hkl indices as those of MoS_2. In either case, equal conditions of non-extinction of reflexes of the type hhl and 00l prevail with even l. For all these reasons, the authors consider molybdenum diselenide and molybdenum disulfide to be isostructural compounds. The Debye powder pattern of $ReSe_2$ shows a set of interplanar distances, which indicates a perfect reaction course between Re and Se. This x-ray pattern contains a much greater number of lines than that of $MoSe_2$, which cannot be explained by the elementary cell of the MoS_2 type. The $ReSe_2$ structure is probably lower symmetrical. Electrical conductivity and thermo-emf of $MoSe_2$ and $ReSe_2$ were measured potentiometrically (for methods see: Yu. M. Ukrainskiy, A. V. Novoselova, Yu. P. Simanov, ZhNKh, 1, 148 (1959)). 12-15 mm high columns, 4 mm in diameter, produced under a pressure of 8 tons/cm^2, served as specimens. Conductivity was measured between 20 and 70°C. The specific conductivity of $MoSe_2$ was $1.23 \cdot 10^{-4}$ ohm^{-1}·cm^{-1} at 22°C, and increased with

Molybdenum and rhenium diselenides

rising temperature. At 62°C, it was $2.30 \cdot 10^{-4}$ $ohm^{-1} \cdot cm^{-1}$. The conductivity of $ReSe_2$ was $6.75 \cdot 10^{-5}$ $ohm^{-1} \cdot cm^{-1}$ at 24°C, and $10.7 \cdot 10^{-5}$ $ohm^{-1} \cdot cm^{-1}$ at 64°C. The positive temperature coefficient of electrical conductivity and the value of the latter point to the semiconductor properties of $MoSe_2$ and $ReSe_2$. This is confirmed by the high thermo-emf proved by the authors. The thermo-emf was measured by the integral method in the ratio to alumel. The temperature difference between the two ends of the specimen was varied between 25 and 150°C. This changes the thermo-emf of $MoSe_2$ between 610 and 430 μv/deg and that of $ReSe_2$ between 1200 and 800 μv/deg. In either case, the probe (alumel) was negatively charged. Therefore, the authors consider the two diselenides to be p-type semiconductors. They thank Yu. P. Simanov for discussion of the results. There are 1 table and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The references to English-language publications reads as follows: H. V. A. Briscoe, R. L. Robinson, E. M. Stoddart, J. Chem. Soc., 134, 1439 (1931).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

Card 3/4

L 17828-63 EWP(q)/EWT(m)/BDS AFFTC/ASD RDW/JD 59

ACCESSION NR: AP3004340 S/0078/63/008/008/1801/1805 57

AUTHOR: Aslanov, L. A.; Ukrainskiy, Yu. M.; Simanov, Yu. P. (Deceased)

TITLE: Tantalum diselenide and triselenide 27

SOURCE: Zhurnal' neorganicheskoy khimii, v. 8, no. 8, 1963, 1801-1805

TOPIC TAGS: chalcogenide, transition metal, transition metal chalcogenide, diselenide, triselenide, tantalum-selenium system, tantalum diselenide, tantalum triselenide, semiconductor, crystalline structure, phase composition, electrical conductivity, thermal emf, lattice parameter, nonstoichiometric tantalum diselenide, beta modification, delta modification, beta-tantalum disulfide, delta-tantalum disulfide

ABSTRACT: Crystalline structure, phase composition, electrical conductivity, and thermal emf have been determined for a series of synthetic samples in the $TaSe_2$—$TaSe_3$ composition range. The study was initiated in view of the known semiconductor properties of certain transition metal chalcogenides and the incomplete data in the literature on phase composition in the Ta—Se system. The samples were synthesized from the elements in evacuated quartz ampoules. Chemical and

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L 17828-63

ACCESSION NR: AP3004340

2

microscopic analysis of samples prepared by sintering at 750C followed by gradual cooling revealed the existence of two phases, $TaSe_3$ whiskers and $TaSe_{1.98}$ lamellar structure with a hexagonal unit cell. The x-ray powder patterns of a $TaSe_{1.98}$ sample prepared by sintering at 850C and gradual cooling, and of the same sample reheated at 900C and then sublimed in a vacuum at 1100C, made it possible to distinguish β- and δ-crystalline modifications of $TaSe_{1.98}$ having the lattice parameters a = 3.429 Å, c = 12.73 Å and a = 3.46 Å, c = 37.9 Å, respectively. A structural analogy is drawn between the β- and δ-$TaSe_{1.98}$ and β- and δ-TaS_2. Stoichiometric $TaSe_2$ was obtained by water-quenching of the sample from 750C. The $TaSe_2$ crystals were found to belong to a hexagonal system with lattice parameters a = 3.44 Å and c = 6.27 Å. Only two phases were detected over the entire $TaSe_{1.98}$—$TaSe_{3.00}$ composition range. The relatively high electrical conductivity of β-$TaSe_{1.98}$ and $TaSe_3$ (800 and 150 $ohm^{-1} \times cm^{-1}$, respectively) and the low thermal emf (e.g., 0 for $TaSe_3$-alumel thermocouple) lead to the conclusion that the chemical bond in tantalum diselenide and triselenide is essentially metallic in character. "In conclusion, the authors express their deep gratitude to A. V. Novoselova for her valuable advice and continuing interest in the work." Orig. art. has: 3 tables.

Card 2/3

ASLANOV, L.A.; SIMANOV, Yu.P. [deceased]; NOVOSELOVA, A.V.; UKRAINSKIY, Yu.M.

Tantalum triselenide and trisulfide. Zhur. neorg. khim. 8 no.12: 2635-2637 D '63. (MIRA 17:9)

L 20682-65 EWT(m)/EWP(b)/EWP(t) IJP(c) RDW/JD/JG
ACCESSION NR: AP4044816 S/0078/64/009/009/2264/2265

AUTHOR: Aslanov, L. A.; Novoselova, A. V.; Ukrainskiy, Yu. M.; Simanov, Yu. P.

TITLE: Variable composition phases in the tantalum-selenium system

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 9, 1964, 2264-2265

TOPIC TAGS: tantalum, selenium, system, variable phase composition, tantalum selenide, tantalum diselenide

ABSTRACT: The phase relationships in the Ta-Se system in the composition region $TaSe_{1.0-2.0}$ were investigated. Samples were prepared by heating the [illegible] ampoules at 800C for 400 hours and cooling slowly to room temperature. In compositions in the region $TaSe_{1.98-1.67}$ x-ray powder diagrams showed the presence of beta- gamma- and delta- modifications. [illegible] the gamma and delta- $\beta \rightarrow \gamma$ [illegible] $\beta \rightarrow \delta$ [illegible] $TaSe_2$, [illegible] the beta-modification

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L 20682-65
ACCESSION NR: AP4044816

is metastable in the $TaSe_{1.98-1.67}$ region; the solid solutions based thereon

the [illegible]-modification increased, while for gamma- it decreased as the tantalum

SUBMITTED: 12Oct63 ENCL: 00

SUB CODE: SS, GC NO REF SOV: 002 OTHER: 00

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LELICHENKO, V., inzh.; UKRAINSKY, F., inzh.

Making thermosite-concrete wall blocks without using cement. Stroi. mat. 4 no.5:35-37 My '58. (MIRA 12:4)

1. Nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy Akademii stroitel'stva i arkhitektury USSR (for Lelichenko). 2. Zavod im. Il'icha v g. Zhdanove (for Ukrainskiy).
(Concrete blocks)

a L 27862-66 EWT(d)/EWT(l)/EWT(m)/EWP(w)/EPF(n)-2/EWP(v)/T-2/EWP(t)/EWP(k)/
ACC NR: AP5028531 EWP(b)/EWA(h)/ETC(m) SOURCE CODE: UR/0286/65/000/020/0125/0125
IJP(c) JD/WW/JG/EM/DJ

AUTHORS: Ukraintsev, B. N.; Vilnitis, A. Ya.; Sirotenko, V. G.; Foliforov, V. M.

ORG: none

TITLE: Electromagnetic induction pump. Class 59, No. 175825 [announced by Central Project-Construction Bureau of Mechanization and Automation of the Council of National Economy of the Latvian SSR (Tsentral'noye proyektno-konstruktorskoye byuro mekhanizatsii i avtomatizatsii sovnarkhoza Latviyskoy SSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 125

TOPIC TAGS: electromagnetic pump, liquid metal pump, magnetic circuit, electrode, liquid metal

ABSTRACT: This Author Certificate presents an electromagnetic induction pump containing a magnetic circuit, an inductor with coils, and electrodes located in slots in the body which has a passage for the pumped fluid (see Fig. 1). To increase its operating temperature range, the pumped liquid metal is used as the inductor winding material. This metal fills the inductor and electrode slots

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UDC: 621.689

L 27862-66

ACC NR: AP5028531

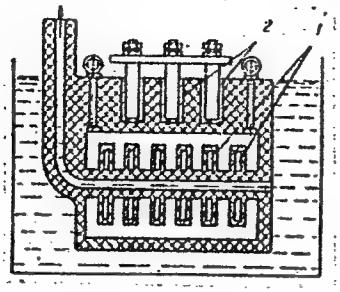

Fig. 1. 1 - Inductor slots; 2 - slots in body.

and comes from the pumping channel. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 14Oct64

Card 2/2

UKRAINTSEV, B. S. (Candidate of Philosophical Sciences)

"On the Possibilities of Cybernetics in View of the Property of Representation of Matter."

Filosofskiye voprosy kibernetiki (Philosophical Problems of Cybernetics), Publishing House of Socio-Economic Literature, Moscow, 1961 392 p.

USSR/Nuclear PHYsics - Nuclear Engineering and Power C-8

UKRAINTSEV F. I.

Abst Jour : Ref Zhur - Fizika, NO 1, 1958, 597.

Author : Leypunskiy, .A. I., Blokhintsev, D. I., Aristarkhov, I. M., Bondarenko, I. I., Kazachkovskiy, O. D., Pinkhasik, M. S., Stavisskiy, Yu. Ya., Stumbur, E. A., Ukraintsev, F. I., Usachev, L. N.

Inst : -

Title : Experimental Fast-Neutron Reactor BR-2

Orig Pub : Atom. energiya, 1957, 2, No 6, 497-500

ABstract : Brief description of the arrangement of the experimental operating reactor with fast neutrons and its basic experimental and auxiliary equipment. The reactor is intended for physical research with fast neutrons. The active zone of the reactor is made up of plutonium rods; the lateral reflector is made of impoverished uranium. The heat is carried away from the active zone by mercury and from the uranium reflected by air. The total nominal power of the reactor is 150 kw, of theses 100 kw are liberated. in the active zone.

LEIJPUNSKIJ, A.I. [Leypunskiy, A.I.]; BLOCHINCEV, D.I. [Blokhintsev, D.I.]; ARISTARCHOV, I.N. [Aristarkhov, I.N.]; BONDARENKO, I.I.; KAZACKOVSKIJ, O.D. [Kazakovskiy, O.D.]; PINCHASIK, M.S.; STAVISAKIJ, Ju.Ja. [Stavisskiy, Yu.Ya.]; STUMBUR, E.A.; UKRAJINCEV, F.I. [Ukraintsev, F.I.]; USACEV, L.N. [Usachev, L.N.]; MEDONOS, S. [translator]

Soviet experimental reactor with fast neutrons BR-2. Jaderna energie 3 no.8:231-233 Ag '57.

SOV/89-5-3-6/15

AUTHORS: Leypunskiy, A. I., Abramov, A. I., Andreyev, V. N., Baryshnikov, A. I., Bondarenko, I. I., Galkov, V. I., Golubev, V. I., Gul'ko, A. D., Guseynov, A. G., Kazachkovskiy, O. D., Kochergin, N. V., Krasnoyarov, N. V., Kuz'minov, B. D., Morozov, V. N., Nikolayev, M. N., Smirenkin, G. N., Stavisskiy, Yu. Ya., Ukraintsev, F. I., Usachev, L. N., Fetisov, N. I., Sherman, L. Ye.

U KRAINTSEV, F.I.

TITLE: Investigations of the Physics of Reactors With Fast Neutrons. I (Issledovaniya po fizike reaktorov na bystrykh neytronakh)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 3, pp. 277-287 (USSR)

ABSTRACT: Since 1950 experiments have been carried out with fast reactors by the Main Administration of the Use of Nuclear Energy. At the Physics Institute of this organization the fast-neutron reactor [redacted] 1 was put into operation early in 1955, and the reactors [redacted] 2 and [redacted] 5 followed in 1956 and 1957 respectively.

Reactor [redacted] -1:

Power	50 MW
Active zone	diameter and height ~15 cm
Fuel	plutonium diameter ~1 cm
Canning	thin steel tube

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The active zone may be surrounded by 2 mobile shields. Shield 1 consists of depleted uranium, and shield 2 of copper. An additional shield can be fastened on one side on to the shield with a diameter of 70 cm, so that total thickness can be increased to 60 - 100 cm. With this reactor investigations were carried out of: the spatial and energy distribution of the neutrons, of which the results are shown in a table for Pu^{239} (n,f), U^{233} (n,f), U^{235} (n,f), U^{238} (n,f), Np^{237} (n,f), Pu^{240} (n,f), U^{238} (n,γ), Au^{197} (n,γ), U^{238} (n,2n). Measurement of the conversion factor. The latter was determined experimentally as amounting to 2,4 to 2,5. It was also calculated by means of the multi-group computation method in S_4-th approximation (Ref 1). The electronic computer was used under the supervision of Professor Ye. S. Kuznetsov. For computation the experimental values for μ of V. I. Kalashnikova (Ref 5), G. N. Smirenkin (Ref 6), B. D. Kuz'minov (Ref 7), and for α the values obtained by P. Ye. Spivak (Ref 8), V. N. Andreyev (Ref 9) were used. As a result of computations the coefficient was found to amount to 2,6.

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The Distribution of Neutrons in Uranium.
The cross sections of the various reactions for the equilibrium spectrum and for the asymptotic spectrum of the depleted uranium was determined both theoretically and experimentally. The asymptotic length of diffusion determined experimentally and theoretically amounts to 9,1 ± 0,1 cm. The average number of fissions of uranium 238 caused by fission neutrons amounts to 0,17 ± 0,01. This is in agreement with the data given by reference 10.
Furthermore, the influence exercised by the resonance structure of the cross sections upon the spatial distribution of the neutrons is investigated. Kh. D. Mishchenko showed that for neutrons with 24 keV the total cross section for copper is reduced by about three times its amount with a modification of target thickness of from 0,5 to 30 mm. There are 12 figures, 7 tables, and 15 references, 9 of which are Soviet.
(Continued on abstract 7/15)

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